National Institute of Environmental Health Sciences

Clinical and epidemiological characteristics of adult hand, foot, and mouth disease in northern Zhejiang, China, May 2008 - November 2013

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Abstract:

Background: Hand, foot, and mouth disease (HFMD) is an infectious disease typically caused by enterovirus 71 (EV71) and Coxsackievirus A16. The incidence of HFMD appears to be increasing across the Asia Pacific region, with deaths occurring predominantly among children. Therefore, most HFMD reports focus on children and few have studied HFMD in adults. However, more adult HFMD cases may be seen in the foreseeable future as a result of global warming, continued viral evolution, and an increase in traveling. Thus, this study investigated the clinical and epidemiological characteristics of adult HFMD.Methods: Case data of 49 adult HFMD patients who attended The First Affiliated Hospital of Jiaxing College, China from May 2008 to November 2013 were obtained. Socio-demographic data were collected through follow-up phone calls. Throat swab specimens were tested for enterovirus by quantitative reverse transcription-polymerase chain reaction and further confirmed by virus isolation assay. For 10 patients infected with EV71, the gene encoding the EV71 VP1 protein was sequenced and analyzed. Data from 8,354 child HFMD patients and 49 adult patients in the fever clinic of The First Affiliated Hospital of Jiaxing College during the same period were collected for comparison.Results: This study revealed that close contact with HFMD patients and poor personal hygiene consciousness were risk factors for adult HFMD. This study also found that EV71 subgenotype C4a was the most common pathogen associated with adult HFMD in this area. Furthermore, this study demonstrated several unique epidemiological characteristics of adult HFMD compared to child HFMD, such as the geographic and gender distribution of adult HFMD patients and HFMD seasonality.Conclusions: The findings in this study showed the potential threat of adult HFMD.

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Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Temperature

Temperature: Fluctuations

Geographic Feature:

resource focuses on specific type of geography

Urban

Geographic Location: ☒

resource focuses on specific location

Non-United States

Non-United States: Asia

Asian Region/Country: China

Health Impact: ☒

specification of health effect or disease related to climate change exposure

Infectious Disease, Other Health Impact

Other Health Impact: hand-foot-mouth disease

Population of Concern: A focus of content

Population of Concern: ☒

populations at particular risk or vulnerability to climate change impacts

Children, Low Socioeconomic Status

Resource Type: ☒

format or standard characteristic of resource

Research Article

Timescale: ☒

time period studied

Time Scale Unspecified